

REMARKS

Applicants request favorable reconsideration of this application in view of the foregoing amendments and the following remarks. Of claims 1-10, 12, and 14 that were pending in the application, claims 1 and 11 were rejected in the Office Action. Applicants appreciate the allowance of claim 12 and the indication of allowable subject matter in claims 2-10. By way of this Amendment, Applicants have amended claims 2, 3, 12, and 14, as requested by the Examiner. Accordingly, claims 1-10, 12, and 14 remain pending for further consideration.

1. Objection to Claims 2, 3, 12, and 14

The Examiner objected to claims 2, 3, 12, and 14 for various typographical reasons, each of which has been fully obviated by way of the amendments made herein to these claims. Accordingly, as the grounds for the objection are now moot, Applicants respectfully request a withdrawal of the objections to claims 2, 3, 12, and 14.

2. Rejection of Claims 1 and 14

The Examiner rejected claims 1 and 14 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,357,915 ("Yamamoto"). For the following reasons, Applicants respectfully traverse this rejection.

Independent claim 1 recites a variable-valve-actuation (VVA) apparatus for an internal combustion engine with a valve. The VVA apparatus of claim 1 includes, among other possible things (*italic emphasis added*):

- a control shaft arranged rotatable in accordance with operating conditions of the engine;
- an alteration mechanism which changes at least an operating angle of the valve in accordance with rotation of the control shaft; and
- a drive mechanism which rotates the control shaft, the drive mechanism comprising an electric motor and a reduction mechanism, *the reduction mechanism having a reduction ratio set to be larger when the valve is under control of small operating angle than when the valve is under control of large operating angle.*

Similarly, independent claim 14 (as amended herein) also recites a VVA apparatus for an internal combustion engine with a valve. The VVA apparatus of claim 14 includes, among other possible things (*italic emphasis added*):

- a control shaft arranged rotatable in accordance with operating conditions of the engine;
- means for changing at least an operating angle of the valve in accordance with rotation of the control shaft; and

means for rotating the control shaft, the rotating means comprising means for providing torque and means for reducing the torque, *the reducing means having a reduction ratio set to be larger when the valve is under control of small operating angle than when the valve is under control of large operating angle.*

As hereafter explained, Yamamoto fails to teach or suggest at least the above-italicized limitations of the VVA apparatuses recited in claims 1 and 14.

In asserting that Yamamoto teaches the above-italicized limitations in claims 1 and 14, the Office Action points to col. 11, lines 39-52 and col. 9, lines 35-43. The cited passages, however, fail to teach or suggest setting the reduction ratio to a large value when the operating angle is small and vice versa. Rather, for example, col. 11, lines 39-52 discloses that the number of teeth of the reduction gears 138, 139 can be used to control valve lift and valve timing. The cited passage, however, says nothing of setting the reduction ratio to a larger value when the valve is under control of a small operating angle as compared to when the valve is under control of a large operating angle.

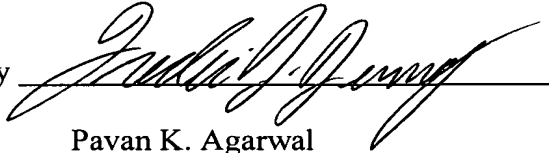
In light of the foregoing, as Yamamoto fails to teach or suggest at least the above-italicized limitations of claims 1 and 14, Yamamoto can not be used to reject either claim under 35 U.S.C. § 102(b). Accordingly, Applicants respectfully request a withdrawal of the rejection of claims 1 and 14 under § 102(b).

CONCLUSION

For the aforementioned reasons, claims 1-10, 12, and 14 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED REGARDING THIS APPLICATION UNDER 37 C.F.R. §§ 1.16-1.17, OR CREDIT ANY OVERPAYMENT, TO DEPOSIT ACCOUNT NO. 19-0741. SHOULD NO PROPER PAYMENT BE ENCLOSED HEREWITH, AS BY A CHECK BEING IN THE WRONG AMOUNT, UNSIGNED, POST-DATED, OTHERWISE IMPROPER OR INFORMAL OR EVEN ENTIRELY MISSING, THE COMMISSIONER IS AUTHORIZED TO CHARGE THE UNPAID AMOUNT TO DEPOSIT ACCOUNT NO. 19-0741. IF ANY EXTENSIONS OF TIME ARE NEEDED FOR TIMELY ACCEPTANCE OF PAPERS SUBMITTED HEREWITH, APPLICANT HEREBY PETITIONS FOR SUCH EXTENSION UNDER 37 C.F.R. § 1.136 AND AUTHORIZES PAYMENT OF ANY SUCH EXTENSIONS FEES TO DEPOSIT ACCOUNT NO. 19-0741.